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How can we measure the costs and benefits of changes in financial reporting standards?

Katherine Schipper*

Abstract — This paper first describes the components of a conventional cost-benefit analysis, a decision tool that is widely used to evaluate large public-sector projects such as dams. It then compares a conventional cost-benefit analysis to the approaches used by financial reporting standard-setters and others to evaluate the costs and benefits of changes in authoritative accounting guidance. The last portion of the paper describes how accounting research provides analyses of effects of changes in accounting standards and describes how these effects-analyses differ from, and are similar to, a conventional cost-benefit analysis.

Keywords: cost-benefit analysis; financial reporting standards; capital market effects of changes in accounting standards

1. Introduction

This paper discusses a recurring and vexatious issue in financial reporting standard-setting: the practicability of analysing the costs and benefits of a given change in financial reporting standards.¹ That issue raises, at least, the following questions. First, why is analysis of costs and benefits viewed as desirable or, to put it more strongly, necessary as part of the process of establishing authoritative guidance for financial reporting? Second, to what extent are conventional cost-benefit analysis techniques applicable in the financial reporting context? Third, what approaches have been taken by accounting researchers and standard-setters to analyse cost and benefits, and what can we learn from their efforts?

I view the question of analysing the costs and benefits of a given change in financial reporting standards as a special case of the more general question of analysing the costs and benefits of a specific mandatory change in corporate reporting activity generally, for example, a change in frequency of required reports; a change in the amount of time permitted between the end of a reporting

period and the due date of a required financial report; a requirement that financial reports filed with a securities regulator contain a Management Discussion and Analysis. The broader issue that encompasses both financial reporting standards and corporate reporting more generally is the costs and benefits of having a mandatory system for financial reporting. I focus only on the analysis of changes in accounting standards and do not address the larger issue of whether financial reporting should be regulated and if so how and by whom, while recognising both the importance and the controversial nature of the larger issue. That is, I take as given that statutes and regulations in many jurisdictions require listed (and sometimes unlisted) entities to apply specified financial reporting standards, and I do not consider how other factors such as corporate governance concerns affect financial reporting standards. Although the analysis of costs and benefits of changes in financial reporting standards is but one (relatively narrow) issue in the overall question of how best to regulate corporate reporting, I believe that some of the ideas considered in this paper could be pertinent to the consideration of that larger question.²

This paper builds on Meeks and Meeks' (2001)

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¹ This paper is not intended to provide a survey or discussion of research that pertains to cost-benefit analysis generally, or the costs and benefits of financial reporting standards generally or the costs and benefits of a specific standard. I refer to published and unpublished papers only to illustrate certain aspects of my discussion.

² The regulation of corporate reporting is an example of financial regulation. There is a long history of research on financial regulation, and debates continue. For a recent survey, see Leuz and Wysocki (2008) who discuss a broad array of accounting, finance, economics and legal research that considers, among other things, the costs and benefits of regulating corporate disclosures.

review of certain issues involved, and techniques used, in measuring costs and benefits of accounting regulation.³ Their paper provides quantitative measures of certain costs associated with accounting regulation, including, for example, the operating budgets of accounting standard-setters and estimates of compliance costs based on preparer survey data for selected standards as reported by other researchers. They also provide estimates for certain other costs and benefits. Meeks and Meeks point to four sources of benefits from accounting regulation: reducing information search costs, signalling costs and contracting costs; and reducing the problems associated with market failures. In their discussions, therefore, they are considering the costs and benefits of standard-setting, compliance and enforcement combined, under the rubric of accounting regulation, and not necessarily the costs and benefits of any specific change in any of these activities.

With regard to the first benefit of accounting regulation, the reduction of information search costs, Meeks and Meeks estimate those costs as the difference between the costs of active and passive portfolio management; in their analysis, the amount is 0.15% of the value of UK listed securities in 1998. With regard to signalling costs, Meeks and Meeks point to research that identifies dividend payments as costly signalling mechanisms for managers to convey information to shareholders (presumably, in the absence of fully effective alternative mechanisms such as mandatory reporting) and capture the signalling costs of dividends as the tax penalty imposed on dividends, noting that this cost is idiosyncratic to a given tax regime. Finally, Meeks and Meeks discuss but do not provide a mechanism for quantifying the contracting benefits of accounting regulation. Meeks and Meeks also describe the well-known difficulties associated with the dissemination of false or misleading information, including the breakdown of markets as in, for example, Akerlof (1970).⁴

³ As discussed in more detail later, Meeks and Meeks (2001) use the term 'accounting regulation' to refer to financial accounting standard-setting, auditing/assurance and enforcement, and to refer to the overall system of regulation as well as, in some of their discussions, specific standards. In contrast, I focus on financial accounting standard-setting, including the distinction that a standard-setter such as the Financial Accounting Standards Board (FASB) or International Accounting Standards Board (IASB) lacks enforcement powers and is therefore not a regulator.

⁴ Akerlof (1970) describes a market in which goods may be honestly described or dishonestly described and argues that the dishonest market agents will drive the honest agents out of the market. That is, those who are willing and able to describe bad items as good items will deter legitimate buyers and sellers from transacting in that market. The total cost of this information

Meeks and Meeks provide examples, including quantitative examples, of analyses of specific costs and benefits of disclosure regulation generally (e.g. the tax costs of dividend signalling) and point the way toward additional analyses. In contrast, I focus on the concept of analysing costs and benefits and the extent to which this concept is, as a practical matter, applicable to financial reporting standard-setting and to the evaluation of a given change in standards. I also extend the discussion of how to measure the benefits of financial reporting standards to incorporate examples from recent academic research.

This paper is also related to the Financial Accounting Standards Board's (FASB) *Special Report: Benefits, Costs and Consequences of Financial Accounting Standards* (FASB, 1991). This lengthy report lays out several issues that I cover in this discussion paper, describes how the FASB thinks about costs and benefits (at least, circa 1991) and provides a fascinating transcript of a 1990 discussion of the measurability of costs and benefits of accounting standards among members of the Financial Accounting Standards Advisory Council (FASAC) and FASB board members. Allowing for changes in research designs and the refinement of both empirical techniques and measurement in accounting research, I believe the points made in the Special Report remain valid.

This paper is also related to surveys and discussions of research on causes and consequences of financial reporting and disclosure regulation generally. One representative recent paper is Leuz and Wysocki (2008) which surveys both certain theories of voluntary and mandatory disclosures and certain empirical research on the effects of voluntary reporting and disclosure decisions and on certain regulatory changes such as the adoption in the US of Regulation Fair Disclosure (Reg FD). Leuz and Wysocki (and other similar survey/discussion papers) are not specifically concerned with cost-benefit analyses of individual accounting standards. In some cases, they discuss research related to individual regulatory changes (for example, Reg FD and certain provisions of the Sarbanes-Oxley Act of 2002) and to wholesale changes in accounting standards such as voluntary or mandatory adoptions of International Financial Reporting Standards (IFRS). Relative to these broad surveys of academic research, my discussion paper is limited, being concerned only with financial report-

problem is the sum of the amount by which purchasers are cheated and the opportunity loss associated with the transactions that do not occur.

ing standards, and narrowly focused on the practicalities of cost-benefit considerations.

I make the following arguments about the practicability of measuring the costs and benefits of financial reporting standards. First, although the mission statements and conceptual frameworks of standard-setters such as the International Accounting Standards Board (IASB) and the FASB specify a costs and benefits constraint, and some of the authoritative guidance promulgated by these boards contains an explicit costs and benefits discussion, standard-setters do not, in fact, apply a conventional cost-benefit analysis. Second, a conventional cost analysis of a specific standard or standards may be possible (in the sense of doable) but the difficulties and attendant costs may be unreasonable, making the analysis impracticable in a financial reporting standard-setting context. Third, and in contrast to a view that the benefits of accounting standards are more elusive than the costs, academic accounting research has tended to focus more on assessing the capital market and financial reporting benefits of financial reporting standards and less on the implementation costs of those standards. However, the results of this research may be insufficiently nuanced and consistent to be entirely useful in a practical standard-setting context.

This paper is organised as follows. The second section describes some of the ideas that support cost-benefit analysis as it is conventionally used and the third section discusses the applicability of these ideas to financial reporting standards. The fourth section discusses possible approaches to analysing the effects of accounting standards, including how academic accounting research has attempted to quantify certain of those effects. The final section offers some concluding comments.

2. The purpose of analysing costs and benefits

Cost-benefit analysis is a variant of conventional capital budgeting techniques that are widely used to compare the costs and benefits of a potential investment project, for example, acquiring and using a new computer system. It is therefore an ex ante decision tool that is used before a project is undertaken. Modern cost-benefit analysis is generally traced to the 1936 Flood Control Act in the US, which required that the US government should engage in flood control projects 'if the benefits to whomsoever they may accrue are in excess of the estimated costs', that is, if the project has a positive expected net present value.

Formulated this way, cost-benefit analysis does not address the distribution of costs and benefits, but rather their existence and relative expected magnitudes, and it does not address the realised outcome of the project, but rather expectations about those outcomes.⁵

Cost-benefit analysis has become a widely used tool of public sector decision-making, often to assist in the evaluation of large, difficult-to-reverse projects such as dams, bridges and roads. It has been extended to include analyses of certain health and public policy regulations, where the benefits may be associated with hard-to-quantify outcomes such as lives saved or lifetimes extended.⁶ In the absence of a profit-maximisation rule, as is often the case for public sector projects, cost-benefit analysis provides a signal for resource allocation decisions.

A cost-benefit analysis of a public sector proposal enters the decision process after policy analysts have defined the problem to be addressed (or, alternatively, identified the public policy objective to be achieved) and identified feasible solutions or courses of action, including maintaining the status quo. The cost-benefit analysis will: (1) identify the time period of analysis, that is, the period over which costs and benefits are to be estimated; (2) identify the costs and benefits to be included for each alternative, including the status quo; (3) wherever possible, assign monetary values to each cost and each benefit; (4) discount the monetary values of costs and benefits using an appropriate discount rate. The resulting net benefit or cost of each feasible alternative, including the status quo, forms one input into the policy decision.

Factors that complicate a cost benefit analysis include difficulties in identifying the time period over which the costs and benefits are to be realised; difficulties in selecting the appropriate discount rate (particularly if the project in question does not have a physical or economic service life); difficulties in

⁵ As discussed in the fourth section of this paper, empirical-archival analyses of the effects of accounting standards rely on outcomes data. These ex post analyses can be viewed as applying some of the ideas of a conventional cost benefit analysis in an after-the-fact context.

⁶ I do not attempt to survey the voluminous literature on cost-benefit analysis. Interested readers may find it helpful to review Adler and Posner (2001). Examples of public-sector primers on how to implement a cost-benefit analysis, including examples and case studies, include Commonwealth of Australia (2006), New Zealand Treasury (2005) and Bank of England (2006). Of these, the Bank of England study of the application of cost-benefit analysis to the collection of monetary and financial statistics is perhaps most closely linked to the context of financial reporting standard-setting.

identifying costs and benefits, including scope (the groups affected); and difficulties in assigning monetary values to costs and benefits. Of these four sources of difficulties, the latter two appear to be the most discussed by financial reporting standard-setters. The complexity and subjectivity of a cost-benefit analysis increase as the benefits or the costs, or both, become more intangible and qualitative, and less amenable to direct measurement from market transactions. Examples of qualitative benefits in a public policy context might include taxpayer satisfaction from the installation of a system to support electronic filing of tax documents and citizen satisfaction from the ability to view beautiful scenery without obstructions.

Cost benefit analysis uses both revealed preference techniques (based on transactions amounts) and stated preference techniques (based on oral or written statements) to analyse these types of costs and benefits. A revealed preference method compares prices paid for goods and services with and without the cost or benefit being analysed to assign a monetary value to that cost or benefit. For example, to estimate the benefit of being in a good school district or the costs of being in an airport flight path, it is possible to evaluate and compare the selling prices of two otherwise similar houses in two school districts with demonstrably different quality and two otherwise similar houses except that one is in the flight path and the other is not. A stated preference method asks respondents for their views (preferences or perceptions) or perhaps asks them to assign a monetary value to a cost or benefit but does not require any action on their part.⁷

Using the results of a cost-benefit analysis to reach a public policy decision can be further complicated by the presence of deadweight losses, distributional effects and behavioural effects. For example, taxing one group to pay a subsidy to another group is cost-benefit neutral; it has a zero direct cost or benefit because the cost to the taxed group is exactly equal to the benefit to the subsidised group. However, there are at least three complications. First, the cost of administering the tax-and-subsidy project is a deadweight loss (a cost that is incurred if the project is undertaken and avoided if the project is rejected). Second, the tax-

and-subsidy project has clear winners and losers, raising distributional and equity considerations. These considerations lie outside a conventional cost-benefit analysis because that analysis considers only the net cost or net benefit and not who bears the cost and receives the benefit. However, public policy (for example, political) considerations might weight the losses of the taxed group more or less heavily than the gains of the subsidised group – a consideration that can lead to selecting a net cost project or rejecting a net benefit project on distributional grounds. Third, the imposition of taxes and subsidies on two distinct groups will surely affect the economic behaviours of both groups, with potentially significant effects.

To summarise, cost benefit analysis is a decision tool commonly associated with public sector project evaluation. Like a capital budgeting technique in a profit-seeking context, it is inherently *ex ante*, in the sense that it is based on expectations of costs to be incurred and benefits to be realised over the life of a difficult-to-reverse project; it is undertaken before a project is approved (an *ex post* cost-benefit analysis would be based on realisations of cost and benefits, not expectations). It considers monetary values of costs and benefits, sometimes using indirect methods such as revealed preferences and stated preferences to assign monetary amounts to intangible and qualitative costs and benefits. It places the costs and benefits on a comparable basis by discounting the monetary amounts at an appropriate discount rate. Cost benefit analysis does not include equity or distributional effects; that is, it does not distinguish the parties that bear the costs from the parties that receive the benefits. Complications arise when it is not possible to quantify costs and benefits, when there are deadweight losses in the form of costs that cannot be recovered and cannot be associated with benefits, when there are substantial indirect effects that give rise to additional costs and benefits, and when the distribution of costs and/or benefits is important to the public policy decision.

3. Application of cost-benefit considerations to financial reporting standard-setting

This section begins (3.1) by considering two kinds of groups involved in financial reporting that undertake cost-benefit analyses of accounting standards, starting with the standard-setters and using the FASB and the IASB as examples. It then describes (3.2) a second layer of cost benefit (or economic effect) analysis, using the European Union (EU) as an example. A recent example is used (3.3) to describe how the IASB analyses costs

⁷ For example, a person might be asked what sum of money he would view as equivalent to being able to visit a physician once every six months without paying for any of the visits. Stated preferences can be problematic for a variety of reasons, including when respondents are uncertain or unwilling to be forthcoming about trade-offs or when the item being analysed confers benefits or imposes costs on many, for example, the costs and benefits of preserving forests as national parks.

and benefits (or, to use a more recent term, effects) of a specific standard. This section concludes (3.4) with a discussion of the alignment between conventional cost-benefit analysis and the way financial reporting standard-setters appear to have implemented this idea.

3.1. Role of the standard-setters

Cost-benefit considerations are included in the FASB's mission statement and its conceptual framework and the IASB's Framework as part of the standard-setter's responsibilities. In considering its responsibility for assessing the costs and benefits of its standards, the FASB clarified in Concepts Statement 2, para. 144, that even if it is difficult or impossible to make the assessment quantitatively, 'the Board cannot cease to be concerned about the cost-effectiveness of its standards. To do so would be a dereliction of its duty and a disservice to its constituents.' Therefore, the idea of subjecting authoritative guidance to cost-benefit considerations is laid out as part of the FASB's duties, as it understands them. Paragraph 44 of the IASB's *Framework*, 'Balance between benefit and cost', contains a discussion that is broadly consistent with that in the FASB's conceptual framework but much abbreviated. In both conceptual frameworks, the cost-benefit analysis is presented as a constraint, not a qualitative characteristic.

The FASB's conceptual framework contains several discussions of costs and benefits. Concepts Statement 1 contains the following assertion (para. 23):

'The information provided by financial reporting involves a cost to provide and use, and generally the benefits of information provided should be expected to at least equal the cost involved. The cost includes not only the resources directly expended to provide the information but may also include adverse effects on an enterprise or its stockholders from disclosing it ... The collective time needed to understand and use information is also a cost ... [T]he benefits from financial information are usually difficult or impossible to measure objectively, and the costs often are; different persons will honestly disagree about whether the benefits of the information justify its costs.'

In addition, in the description of qualifying criteria for financial statement recognition, Concepts Statement 5, para. 63 specifies a 'cost benefit constraint' to be imposed, in addition to several recognition criteria, stating, '[T]he benefits from

recognising a particular item should justify perceived costs of providing and using the information.'⁸

Concepts Statement 2 addresses the difficulties of analysing the costs and benefits of a specific standard, stating that they 'are both direct and indirect, immediate and deferred. They may be affected by a change in circumstances not foreseen when the standard was promulgated. There are wide variations in the estimates that different people make about the dollar values involved and the rate of discount to be used in reducing them to a present value' (para. 142). Given this difficulty, Concepts Statement 2 proposes a qualitative analysis (para. 143), in three steps, as follows. First, does the matter 'represent a significant [financial reporting] problem?' Second, does a standard 'impose costs on the many for the benefit of a few?' Third, 'there are usually alternative ways of handling an issue. Is one of them less costly and only slightly less effective? Even if absolute magnitudes cannot be attached to costs and benefits, a comparison among alternatives may yet be possible and useful.'

It is possible to place this discussion in the context of a conventional cost benefit analysis. Specifically, the first criterion – the presence of a significant financial reporting problem – conveys the implication that the status quo is not acceptable. That is, a decision to place a project on the standard-setter's agenda would seem to be an outcome of an implicit cost-benefit analysis; the net benefit of doing nothing is outweighed by the net benefit of promulgating new guidance.⁹ The FASB's mission statement (available at www.fasb.org) states that one consideration in adding a project to its agenda is 'pervasiveness of the issue – the extent to which an issue is troublesome to users, preparers, auditors or others; the extent to which there is diversity of practice; and the likely duration of the issue (i.e. whether transitory or likely to persist).' That is, the FASB (or, more recently, its chairman) considers whether the status quo imposes a cost – described in

⁸ Thus, costs and benefits of accounting standards are included as a constraint and not as qualitative characteristics, for example, relevance and reliability. The purpose of discussing costs and benefits is to establish that the standard-setter should consider whether the benefits arising from a given standard justify the costs associated with that standard.

⁹ As discussed later, the incremental out-of-pocket cost of developing a single new standard would be zero as long as the work could be completed with resources in place. There would be a potential opportunity cost, if some combination of time and money constraints preclude a standard-setter from undertaking an otherwise desirable project. I thank Stephen Zeff for pointing this out to me.

terms of the issue being pervasively troublesome – and whether that cost is transitory.

The second criterion seems to pertain to distributional effects (who bears the costs and who reaps the benefits of financial reporting changes). Distributional effects are not part of a conventional cost-benefit analysis, although a reading of comment letters to the FASB and IASB suggests that they are very much in the minds of preparers, auditors, analysts/users and others with an interest in financial reporting standards. Based on the information in the basis for conclusions sections of recent standards issued by the IASB and FASB that describe standard-setter redeliberations of proposed standards in light of issues raised in comment letters, it does not appear that the IASB and FASB believe it is practicable to measure (quantify) the distributional effects of a given proposed standard – the discussions are largely, if not wholly, qualitative. Likewise, the information in the basis for conclusions does not provide systematic evidence that the IASB and FASB believe that distributional effects on one group (for example, preparers) should systematically receive greater weight, less weight, or equal weight as compared to effects on any other group.¹⁰

The third criterion of the cost-benefit discussion in Concepts Statement 2 pertains directly to seeking a cost-effective alternative, even if the analysis of costs and effects must be qualitative. Observation of the due process procedures of the IASB and FASB suggests that this criterion is applied continually during the standard-setting process, including seeking input from constituents about anticipated costs of various alternatives, and also after a standard has been promulgated, including deferring an effective date. This iterative process suggests that the standard-setter continues to receive information about the cost of applying a standard both while the provisions are being deliberated and after the standard-setter has reached a decision.¹¹

¹⁰ It is, of course, an empirical question whether the views of some group of constituents regularly prevail and, if they do, whether this is because of the technical merits of that group's input, or because of an implicit and perhaps even unconscious weight attached to distributional effects for that group, or for some other reason. This question belongs to the politics of standard-setting, a topic that lies outside the scope of this discussion paper.

¹¹ For example, the FASB provided for two one-year deferrals, applicable to non-public entities, of the effective date of Interpretation 48, *Accounting for Uncertainty in Income Taxes*, 2006, now part of Accounting Standards Codification (ASC) Topic 740. Cost-based delays occur in other settings, as evidenced by the repeated deferrals of certain provisions of the Sarbanes-Oxley Act, s. 404, applicable to certain smaller SEC registrants.

The FASB and IASB have retained the idea of a cost benefit constraint in the due process documents issued as part of their joint project to complete, improve and converge their conceptual frameworks. Those documents recast the constraints on financial reporting as materiality and cost; the discussion of benefit is embedded in the discussion of cost and does not receive separate treatment. The exposure draft *Conceptual Framework for Financial Reporting: The Objective of Financial Reporting and Qualitative Characteristics and Constraints of Decision-Useful Financial Reporting Information* (29 May 2008; hereinafter the conceptual framework exposure draft) concludes that any cost-benefit analysis will usually be more qualitative than quantitative, acknowledges that the analysis often will be incomplete, and lists specific examples of both costs and benefits (para. QC29–QC33). The exposure draft lists as information provision costs the costs of collecting, processing, verification and dissemination and notes that preparers expend most of the efforts of information provision while the costs are born by capital providers. The exposure draft also lists, for users, costs of analysing and interpreting (that is, using) information and costs associated with incomplete information in financial reports. In terms of benefits, the exposure draft suggests that:

'Financial reporting information helps capital providers make better decisions, which results in more efficient functioning of capital markets and a lower cost of capital for the economy as a whole. Individual entities also enjoy benefits, including improved access to capital markets, favourable effect on public relations, and perhaps lower costs of capital. The benefits may also include better management decisions because financial information used internally often is based at least partly on information prepared for general purpose financial reporting purposes' (para. QC31).

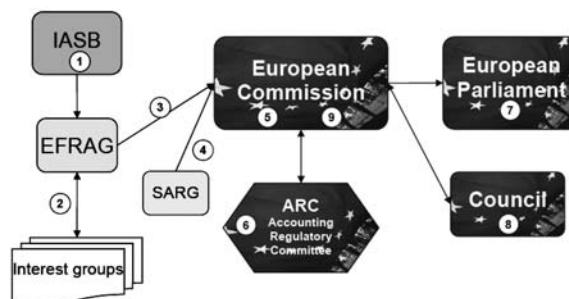
This discussion points toward an empirical measure of the benefits of a change in financial reporting standards, specifically, a decrease in the cost of capital. I return to this idea later on in this paper.

3.2. Cost-benefit analyses in the EU

Although both the FASB and the IASB understand cost-benefit analysis to be part of their responsibilities, we might ask why an independent private sector standard-setter that is not a regulatory body would not leave most or even all considerations of costs and benefits to securities regulators or other

government agencies, who represent a public policy interest.¹² For example, a securities regulator could perform its own cost-benefit analysis of each standard and could decline to enforce any authoritative financial reporting guidance that did not meet its cost-benefit threshold. The EU appears to have adopted a policy along these lines, as described next.

The EU has adopted a policy and procedures for standard-by-standard consideration and possible endorsement for the guidance issued by the IASB. After the IASB has issued a standard (including its own analysis of costs and benefits), the European Financial Reporting Advisory Group (EFRAG) provides both advice as to whether the standard meets established criteria, including understandability, relevance, reliability, comparability, conducive to the European public good and an economic effects analysis. This is a separate analysis, not a review of the IASB's analysis.¹³ Then the Standards Advice Review Group (SARG) provides an opinion on the EFRAG advice, followed by recommendations and ultimately votes by, among others, the Accounting Regulatory Committee of the EC.¹⁴ The European Parliament and the Council of the EU can object to an adoption decision but have a limited time to do so. This portion of the endorsement process is shown in the following diagram.¹⁵



Given this elaborate multi-step, multi-party analysis, why does it make sense for the IASB to do its own cost-benefit analysis? Why not leave the entire effort to the EC and comparable bodies in the other jurisdictions where IFRS (or standards based on or adapted from IFRS) are used? It would seem that such an approach would reduce the cost of standard-setting by eliminating one step in the process. I suggest that an analysis of these questions should include the following considerations. First, what group is best equipped, in terms of skills and subject-matter knowledge, to consider the costs and benefits of a given financial reporting standard? Second, what group has the greatest incentive and greatest ability to be objective in its analysis? Third, to what extent is a standard-by-standard analysis by a governmental body detrimental to the independence of the standard-setter? Fourth, and related to the issue of independence, to what extent is a standard-by-standard analysis by a governmental body, followed by a standard-by-standard decision as to whether to require the use of the standard, detrimental to the quality of financial reporting standards? Fifth, what are the advantages and disadvantages of a system in which a governmental body (for example, a securities regulator) recognises or endorses the standard-setter, as opposed to each of its standards?

3.3. Cost-benefit example: IFRS 3

The FASB and IASB include explicit discussions of costs and benefits in their recent standards. This subsection describes the benefits and costs discussion in IFRS 3, *Business Combinations*,¹⁶ selected because it was recently issued, it represents the culmination of the first major joint convergence project of the FASB and IASB, and it illustrates how the IASB currently thinks about costs and benefits.

The benefits and costs discussion of IFRS 3 begins (para. BC 435) with a statement of the objective of financial statements and states the

¹² I view the distinction between a standard-setting body and a regulator as important. Only the latter has enforcement powers. In some cases, both financial reporting standard-setting and securities regulation (enforcement) are carried out by the same group, for example, a Ministry of Finance; however, this is not the case for the FASB and the IASB.

¹³ Reviews (or audits) of cost-benefit analyses, as opposed to undertaking a second cost-benefit analysis, may be part of an overall public-policy-decision-making apparatus. For example, the US Government Accountability Office (GAO) reviews and comments on the cost-benefit analyses of certain government regulatory bodies if asked to do so by members of the US Congress. See, for example, the GAO's *Clean Air Act: Observations on EPA's Cost-Benefit Analysis of Its Mercury Control Options* (GAO, 2005). This study did not independently estimate the costs and benefits of the options the EPA (Environmental Protection Agency) considered; rather, it reviewed the quality of the cost-benefit analysis process and offered a series of criticisms of that process, including non-comparable estimates, failure to estimate health benefits associated with decreased mercury emissions and failure to analyse key uncertainties.

¹⁴ The EC's analysis of IFRS 9, issued November 2009, suggests that the EC takes seriously the task of reconsidering IFRSs on a standard-by-standard basis and does not feel the need to defer to the IASB. In a letter to Sir David Tweedie, Chairman of the IASB, dated 11 November 2009, Jorgen Holmquist, speaking for the EC, suggested that IFRS 9 did not reach 'the right balance on fair value accounting and possible impact on financial stability.'

¹⁵ This diagram and the related description are downloaded from the EU's website: http://ec.europa.eu/internal_market/accounting/docs/ias/endorsement_process.pdf.

¹⁶ The IASB has also issued a document *Business Combinations Phase II: Project summary, feedback and effect analysis*, January 2008 that elaborates on most of the cost and benefit ideas discussed in the standard.

criterion that the benefits derived from information should exceed the costs of providing it, along with two qualifying statements: (1) the evaluation of benefits and costs is essentially a judgmental process; and (2) costs and benefits may be borne by different groups. In reaching its judgment, the IASB considers the costs incurred by preparers of financial statements and their comparative advantage in developing information relative to the costs users would incur to develop substitutes for missing information; the costs incurred by users of financial statements when information is not available; the benefit of better decision-making as a result of improved financial reporting. The IASB concluded that the revised IFRS 3 confers benefits by 'converging to common high quality, understandable and enforceable accounting standards for business combinations in IFRSs and US GAAP. This improves the comparability of financial information around the world and it also simplifies and reduces the costs of accounting for entities that issue financial statements in accordance with both IFRSs and US GAAP' (para. BC436). As I read this statement, the IASB identifies two benefits: (1) a converged standard that increases comparability among entities that apply IFRS and US GAAP; (2) a standard that is high quality, understandable and enforceable. I interpret the second benefit as encompassing both quality of the standard, presumably captured by its ability to produce decision-useful information when properly implemented, and implementation, presumably captured by understandability and enforceability.

The remainder of the discussion refers to specific aspects of IFRS 3, including, for example, scope, non-controlling interest, contingent consideration and exceptions to the requirement to measure all assets and liabilities of the acquired firm at fair value. In this discussion, the IASB refers to benefits in the form of understandability, relevance, reliability and comparability of information provided; in the discussion of fair value remeasurement of contingent consideration the IASB refers to statements by financial statement users that suggest a perception on the part of those users that the remeasurement requirement would increase the timeliness of information.¹⁷ The discussion of costs describes preparation costs, including obtaining external valuations, audit costs and 'complexities' of certain fair value measurements.

To summarise, the IASB's recent discussion of

costs and benefits of IFRS 3 is entirely qualitative, is couched in terms of qualitative characteristics from conceptual frameworks (for example, relevance, reliability and comparability) and notes that costs and benefits may be borne by different groups. Taking the discussion of IFRS 3 as a representative example of a financial reporting standard cost-benefit analysis, the next subsection discusses the alignment between this approach and a conventional cost-benefit analysis.

3.4. Alignment between a standard-setting discussion and a conventional cost benefit analysis

As previously discussed, a conventional cost benefit analysis has the following components: (1) a time period over which future costs and benefits are estimated; (2) consideration of the costs and benefits of each alternative, including the status quo; (3) assignment of monetary values to costs and benefits; (4) a discount rate to place all monetary values on a comparable basis. The discussion of costs and benefits from IFRS 3 does not specify a time period, discusses the costs and benefits of the status quo (not issuing a revised IFRS 3) primarily by implication, and does not assign monetary values to either costs or benefits. This qualitative approach is consistent with the view that a quantitative approach to cost-benefit analysis of financial reporting standards is impracticable, particularly with regard to benefits. Under this view, a conventional cost-benefit analysis would not be applicable to financial reporting standard-setting.

If this conclusion is accepted, standard-setters might consider whether it would be helpful to acknowledge that a conventional cost-benefit analysis cannot, as a practical matter, be applied to financial reporting standards, and to discontinue the use of language that suggests such an analysis can be done and should be done. A change in terminology, from 'costs and benefits' to 'effects' or 'impacts' may result in a better description of the cognitive process actually used by standard-setters to weigh the consequences of changing authoritative guidance. That is, the standard-setter considers whether a standard will lead to improvements in financial reporting at a reasonable cost. Under this approach, I suggest that the standard-setter could consider the following: abandon the potentially misleading terms 'costs and benefits' and continue the current practice of describing how the standard's provisions, when implemented in a way that is consistent with the objective of the standard, will achieve the desired level of improved financial reporting by yielding financial reports the contents of which mesh with the qualitative characteristics of

¹⁷ Specifically, para. BC437(c) states that users 'have stated that the information they receive under [the predecessor standard] is too late to be useful.'

financial reporting (relevance, reliability and comparability), and explaining the approaches taken to reduce the costs to preparers and, if applicable, auditors.¹⁸ The standard-setter would take as its goal the improvement of financial reporting as measured by the qualitative characteristics, subject to reducing implementation and assurance costs where it makes sense to do so, and would not make an attempt to compare or trade off the benefits to one group against the costs to another group.

Alternatively, standard-setters could re-examine the view that it is not practicable to apply quantitative techniques of cost-benefit analysis to financial reporting standards. Under this approach, standard-setters would thoroughly reconsider the practicability of obtaining data to form quantitative measures, however uncertain, of the costs and benefits of a given reporting standard, and how best to go about that task. After this reconsideration, standard-setters, and their constituents, would conclude that obtaining quantitative measures is worth the cost, in terms of improving financial reporting standard-setting, or that it is not.¹⁹ The next section explores this idea in more detail and provides some examples from accounting research.

4. Possible approaches to analysing effects of a given change in accounting standards

The possibility of a substantial and intractable misalignment between a conventional cost-benefit analysis and the way standard-setters actually analyse the costs and benefits of accounting standards, as well as the notion that it may make sense to abandon the idea of comparing costs with benefits altogether (or at least, abandon the use of terminology suggesting that such a comparison has been

made), raises the question of what are the practical limits of capturing the effects (both costs and benefits) of a given accounting standard, or a set of accounting standards. This section considers this issue from several perspectives, moving from a consideration of costs (4.1) to benefits (4.2), attributes of accounting information (4.3) and market outcomes (4.4). It concludes with examples of accounting research (4.5).

4.1 *Analysing the costs of a change in accounting standards*

In this subsection, I consider which costs are relevant to the analysis of a given change in accounting standards, suggest that, in general, gathering reliable data on many of these costs is impracticable or close to it, and distinguish costs from consequences. I also offer a comment on the distribution of costs, in the context of a conventional cost-benefit analysis.

Which costs are relevant?

A conventional cost benefit analysis requires the identification of all costs that would be incurred or avoided by an alternative that is being considered. Viewed from this perspective, the operating cost of the standard-setter (that is, the size of the standard-setter's budget) would in general not be pertinent to the evaluation of any given standard. The reason is that the standard-setter's total cost is fixed within a relevant range of standard-setting activities; it is sunk with respect to the issuance of an incremental standard. That is, the standard-setter's operating budget is a cost of having standards in general, not a cost of issuing a specific standard. There may be an opportunity cost if the standard-setter is precluded by limits of time or money or both from undertaking all meritorious projects; or, alternatively, there may be an out-of-pocket cost if the addition of a standard-setting project necessitates hiring of professional staff.

In addition, it is only the incremental costs of applying a new standard (for preparers) and the non-recoverable incremental costs of assurance (for auditors) and of using the new information (for analyst/users) that are pertinent to the net cost of that standard. A cost incurred by an auditor or analyst/user that is passed along to a preparer and included in the preparer's cost to apply the standard would not be a net cost of applying a new standard. Those application costs would include the incremental out-of-pocket costs to change information systems (preparers and possibly auditors) and to change models used for analysis, prediction and valuation (users and possibly auditors) as well as

¹⁸ My emphasis is on calibrating the provisions of a standard in terms of their ability to produce relevant, reliable and comparable information when properly applied—an effects analysis. However, in its January 2008 report, *Business Combinations Phase II, Project summary, feedback and effect analysis* (hereinafter, the IASB effect analysis) the IASB appears to distinguish between a cost-benefit evaluation and an effects analysis. As I interpret the report, the effect analysis appears to focus on how financial statement information will change, in terms of measurement and available information, and the cost-benefit analysis appears to focus on preparation and information analysis costs.

¹⁹ Meeks and Meeks (2001: 43) provide several quotes that espouse the importance of cost-benefit analyses in financial reporting standards specifically and accounting regulation more generally, and end with the following hopeful comment and question: '... although the conceptual and measurement difficulties are challenging, each category of cost and benefit is actually amenable to research, research which in some cases could yield fairly precise estimates while in others it should at least significantly narrow the range of possibilities ... Is it unreasonable to conjecture that the benefits of such research would exceed its costs?'

ongoing incremental costs of continuing to apply the new standard. It is an open question as to the time period that should be associated with these costs.

The size and nature (e.g. one-time versus ongoing) of these costs will vary considerably across standards and possibly across reporting entities. In principle, it would be possible to elicit preparer, auditor and analyst/user estimates of these costs, both at adoption and ongoing. Techniques such as stratified (by industry and size) random sampling would support extrapolation of preparer costs and auditor costs from fairly limited samples. The incremental costs to analyst/users could, in principle, be elicited the same way, by asking a sample of analysts/users to report on the incremental costs to change their models because of a new standard. However, developing the cost data would itself involve a cost and the resulting estimates would be inaccurate because of sampling error and because of respondent estimation error. In addition, the standard-setter has no way to compel anyone to provide this type of information.

Finally, the cost of learning a new standard falls on preparers, auditors and users, all of whom need to exert the cognitive effort, and devote the time, to understand the requirements and implications of that standard. The time required represents an opportunity cost – the learner must forgo either leisure or productive activities (if the latter, this cost belongs to the learner's employer). Learning costs would be expected to increase with the complexity of both the standard and the measurement required by the standard. Time and cognitive effort devoted to this learning process have an opportunity cost that in principle might be elicited by using a revealed preference or stated preference technique. One idea would be to ask preparers or analysts/users what is the cash equivalent value of a standard that can be applied with no additional learning versus one that requires a specified amount of learning; the difficulty would be holding constant the other attributes of the standard and holding constant the cost of obtaining information to apply the standard. Developing the survey instrument would itself require substantial standard-setter effort, including possibly devising a mechanism for obtaining revealed preferences.

Distinguishing consequences from costs

An analysis of the costs and benefits of a change in financial reporting standards should distinguish between costs and consequences. Changes in financial reporting standards should be expected to have consequences for decisions that are predi-

cated on judgments or estimates that are based on financial reporting information, for example, assessments of enterprise risk or earning capacity. Investors and creditors may revise their estimates of required return in light of new information made available because of a change in accounting standards; this consequence of the change would be regarded as an overall benefit to the extent that the result is a more efficient allocation of capital in the economy.

Recent FASB standards that eliminate the Qualifying Special Purpose Entity (QSPE) exception²⁰ and require a largely qualitative analysis of variable interest entities provide a current example of consequences of changes in financial reporting standards.²¹ The changes, effective from January 2010, are expected to require certain firms, including, in particular, certain financial services firms, to recognise previously off-balance sheet assets and liabilities associated with certain securitisation activities. The accounting standards do not affect the economic substance (risks and benefits) of the assets and liabilities arising in securitisation structures, but they will in some cases require the balance sheet recognition of those assets and liabilities – a change in information provided, not a change in the risk and pay-off structure of the entity. That is, the securitisation arrangements exist and have done so for some time; the difference for analysts/users lies in the ease of accessing accounting measures of those structures. The consequence of this change in standards, that some would characterise as a benefit of the change, is that investors, creditors, and bank regulators will, after the effective date of the standards, have ready access, through the financial reporting system, to more nearly complete information about assets and liabilities associated with securitisation activities. Bank regulators can choose to use this information in setting regulatory capital requirements, or they can choose to disregard it.

The American Bankers Association (ABA) has requested that bank regulators provide a lengthy transition period (at least three years) before fully using this additional information in setting bank capital requirements, and when the information is used, regulators should take account of arrangements that would be expected to affect the risk of the consolidated assets, such as buying credit protec-

²⁰ A QSPE was exempt from consolidation, based on the reasoning that the entity is so entirely passive that control could not be at issue.

²¹ SFAS 166, *Accounting for Transfers of Financial Assets, an Amendment to FASB Statement No. 140* (2009), now part of Accounting Standards Codification (ASC) Topic 860 and SFAS 167, *Amendment to FASB Interpretation No. 46(R)* (2009), now part of ASC Topic 810.

tion.²² In making these requests, the ABA points to costs in the form of reduced lending and loss of competitive position for US banks if bank regulators immediately use the new information without adjustment. Thus, the consequence of the change in accounting standards is the provision of more information about the assets and liabilities associated with entities' securitisation activities. An alleged potential cost that might be imposed on certain regulated entities involves the use, by regulators, of this information to constrain those entities' lending activities and perhaps their other activities as well.²³ However, that cost is not a cost of the standard.

The focus on consequences and their link (and, sometimes, their conflating) with costs was described over 30 years ago by Zeff (1978) who described 'economic consequences' as the 'impact of accounting reports on the decision-making behaviour of business, government, unions, investors and creditors. It is argued that the resulting behaviour of these individuals and groups could be detrimental to the interests of other affected parties. And, the argument goes, accounting standard-setters must take into consideration these allegedly detrimental consequences when deciding on accounting questions' (Zeff, 1978: 56). He illustrates this issue with examples beginning in 1941, demonstrating that this way of thinking about consequences as costs is not new. Similarly, Oscar Gellein (FASB Special Report, 1991: 87–95) makes the point that the provision of neutral,²⁴ decision-useful information has consequences, noting, 'Financial reporting would be sterile and standards setting would be purposeless if nothing resulted from the reporting ... At the highest level or purpose, financial reporting should be useful in bringing about efficient allocation of available resources.' (p. 88). In other words, financial reporting information should be one of the inputs used by investors and creditors in making decisions about

where to invest and where to lend – it is a signal for capital allocation.

Distribution of costs

Although the distribution of costs (specifically, which party bears them) is not part of a conventional cost-benefit analysis, discussions of costs of accounting standards sometimes imply that the costs are incurred by preparers and the benefits are received by analysts/investors, and that this distributional effect is pertinent to standard-setting. For example, the IASB's effect analysis contains the following language:

'Who bears the costs is important. For example, an acquirer might choose to measure non-controlling interests at their proportionate interests in the net identifiable assets of the acquired business, rather than at fair value. If analysts want to use the fair value of the non-controlling interests in a valuation, for example, each analyst will incur costs estimating that fair value. Allowing a lower cost option for preparers can shift the costs to analysts and other users – assuming, in this example, that the analyst prefers to measure non-controlling interests at fair value. It is also likely that the estimate of fair value made by each analyst will be less reliable than the estimate made by the acquirer ... If the analyst prefers to measure non-controlling interests at their proportionate interest in the subsidiary, then requiring them to be measured at fair value imposes a cost on the preparer with no benefit to the users' (p. 13).

Viewing this discussion as a representative example, I offer the following observations. First, a conventional cost-benefit analysis would study costs and benefits, not which party incurs the costs and which receives the benefits. Second, a discussion of the distribution of costs should be precise as to what is meant by the word 'preparer'. On the one hand, preparers are persons who are paid to be expert in transactions and financial reporting, and to exert effort to prepare financial reports. Under the assumption that preparers (an entity's accounting staff, controller and CFO, for example) are paid a market wage for their efforts, including their cognitive efforts to understand a new accounting standard and how to apply it, they do not incur additional costs from a change in accounting standards. On the other hand, 'preparer' may refer to the owners of the reporting entity, who incur the incremental out-of-pocket costs of changes in accounting standards, including, for example, the costs of new information systems, the costs of

²² Letter dated 15 October 2009 from Michael L. Gullette to the Controller of the Currency, the Board of Governors of the Federal Reserve, the Federal Deposit Insurance Corporation and the Office of Thrift Supervision.

²³ As previously noted, the regulator can choose to disregard the financial accounting information. It could also have imposed a regulatory reporting requirement and regime, in the absence of any financial reporting requirement, that would have had the same effect as basing regulatory behaviour on the FASB's recent standards.

²⁴ Gellein uses the word 'evenhanded' to describe neutrality and notes that 'Evenhandedness has been achieved if enterprises can expect to pay a price for capital that is commensurate with prospective return and assumed risk.' This points toward a focus on the cost of capital and changes therein as an indicator of the effects of changes in financial reporting standards.

training the accounting staff and, possibly, the costs of hiring more accounting professionals.²⁵ Also, as discussed in the next section, if a change in accounting standards confers capital market benefits, those benefits would reasonably be expected to devolve to owners.

The cost of obtaining cost data

I argue that at least some of the costs of a given change in accounting standards could, in principle, be ascertained by using survey methods and revealed preference and stated preference techniques. However, such an approach would itself impose costs on the financial reporting system every time there is an actual or proposed change in standards. Those costs would include the personnel and other costs of devising and administering the instruments and compiling and analysing the resulting data plus the costs to respondents of developing their responses. A potentially significant cost that, in my view, defies quantification is the cost of compelling or inducing those surveyed to respond.

To provide a sense of how one government agency went about obtaining cost data using a survey instrument, see Securities and Exchange Commission, 2009. This is an example of an ex post analysis, based on a survey undertaken during late 2008–early 2009 by the Office of Economic Analysis (OEA, 2009) of the US Securities and Exchange Commission (SEC) of the costs and benefits of the requirement, imposed by s. 404 of the Sarbanes-Oxley Act of 2002 and modified by SEC guidance issued in 2007, that the independent auditor attest to management's assessment of the effectiveness of internal controls over financial reporting.²⁶ To obtain a sense of what might be involved in obtaining survey-based cost data for a complicated standard, it is instructive to consider the length of the report – 139 pages – and the efforts involved, including designing a web-based survey, identifying the recipients of the survey, asking them to participate (and following up), collecting and analysing the data. The list of caveats and cautionary language about the results and their interpretability runs to five pages. I view this report as providing a potentially useful example of both what

can be done in terms of gathering survey data and what kind of effort is required.

4.2. Analysing the benefits of a change in accounting standards

Standard-setters such as the FASB and IASB emphasise the difficulties in quantifying the benefits of accounting standards and suggest that the evaluation of benefits is necessarily qualitative. For example, the IASB's 2008 effect analysis contains the following discussion:

'Our evaluations of costs and benefits are necessarily qualitative, rather than quantitative. This is because quantifying costs, and, particularly, benefits is inherently difficult. Although other standard-setters undertake similar types of analysis, there is a lack of sufficiently well-established and reliable techniques for quantifying this analysis.'

To guide standard-setters' thinking, the FASB's conceptual framework and the IASB's *Framework* point to increases in decision-usefulness, described in terms of relevance, reliability and comparability, as the benefits of accounting standards. 'Relevance' implies the ability to affect a resource allocation decision, generally a credit granting or equity investing decision. The decision context provides the boundaries of usefulness as those items that are pertinent to lending or investing in equity instruments. This criterion, taken in isolation, would not be very restrictive; an airline's load factor or a homebuilder's order backlog would be relevant to a profit analysis. Furthermore, the relevance criterion does not lend itself to quantification; for example, it does not specify how much a given decision would have to be potentially affected by a given item and whether some decisions are more important than others, in terms of supplying relevant information. 'Reliability' implies that the reported item corresponds to what it purports to represent. The assessment of reliability is complicated by: (1) a dearth of objective benchmarks against which to calibrate a given reported item; and (2) even given a benchmark, a lack of agreement on what would constitute the admissible level of unreliability, that is the admissible size of the confidence interval around the reported number. In addition, the development of benchmarks and measures of acceptable amounts of unreliability would still not provide evidence on how to make an unacceptably unreliable number acceptably reliable, including the cost of doing so. 'Comparability' means that similar items are

²⁵ This point is made in the conceptual framework exposure draft, para. QC30: 'Preparers expend the majority of the effort toward providing financial information. However, capital providers ultimately bear the cost of those efforts in the form of reduced returns.'

²⁶ The primary focus of the SEC survey was the effect of the 2007 reforms on the cost-effectiveness of evaluations of internal controls over financial reporting and related audits.

accounted for the same way and different items are accounted for differently. Any standard that contains a free choice in the accounting for a given item, whether implicit or explicit, impairs comparability. IASB and FASB discussions suggest that analysts/users bear the costs of non-comparability, because they incur costs to adjust reported numbers to the extent such adjustments are practicable.

Qualitative characteristics from the FASB's and IASB's conceptual frameworks do not necessarily readily link to empirical measures used by accounting researchers. For example, the concepts statement exposure draft (para. BC2.8–2.10) distinguishes between predictive value (accounting information can be used to make assessments of outcomes before those outcomes occur) and predictability (a statistical notion that pertains to forecast accuracy) and notes that the IASB and FASB do not believe it is appropriate to adopt statistical notions in the framework. However, accounting researchers sometimes explicitly focus on forecast accuracy as an outcome indicator in their examinations of financial reporting outcomes. Although there is sometimes a possible misalignment between the qualitative characteristics and research-based measures, accounting researchers have sometimes attempted to motivate their analyses of effects of financial reporting and changes in reporting requirements in terms of the conceptual framework. The next two sections discuss two approaches, based on attributes of accounting information and on market outcomes, such as indicators of the ex ante cost of capital.

4.3. Attributes of accounting information

Accounting researchers commonly focus on summary indicators such as earnings and book values in their empirical analyses of accounting information and calculate attributes or characteristics of these summary indicators. In this discussion, I identify three categories of attributes of accounting information: market-based, accounting-based and analyst-based.²⁷ Market-based attributes take prices or returns as the reference construct and calculate an earnings or book value attribute based on an estimated association between accounting earnings or book value and either prices or returns. Accounting-based attributes take cash or earnings as the reference construct and calculate an earnings attribute based on the relations among earnings

numbers over a period of time (for example, persistence, predictability) or the relation between earnings and cash flows (for example, smoothness, accruals quality as described by Dechow and Dichev, 2002). Analyst-based attributes are based on the properties of analysts' earnings forecasts, including bias, dispersion and accuracy.

Market-based attributes are grounded in the statistical association between prices or returns (usually equity prices or returns) and accounting amounts, as measured by regressions of prices or returns on accounting numbers. The explanatory power of such regressions is sometimes interpreted as capturing the combined qualitative characteristics relevance and reliability (for example, Barth et al., 2001). One variant of this approach regresses earnings on returns (for example, Ball et al., 2000) and is used to capture timeliness and conservatism (described as the ability of earnings to capture the information that is already in returns, particularly, in the case of conservatism, the negative information).²⁸ Another variant focuses on the slope coefficients, not the explanatory power, of regressions of returns or prices on earnings and (sometimes) book values or reverse regressions of earnings on returns.²⁹

The association between market outcomes and

²⁸ Accounting researchers differ in their views about the meaning and importance of conservatism, and some accounting researchers take issue with what they see as standard-setters' apparent disregard for the value of conservatism in financial reporting. See, for example, Watts (2003) for a discussion of conservatism, including a description of conservatism as more stringent verification requirements for income-increasing items than for income-decreasing items, and arguments suggesting that conservatism is a key element of accounting quality. The FASB's Concepts Statement 2, *Qualitative Characteristics of Accounting Information*, 1980, para. 95, describes conservatism as 'a prudent reaction to uncertainty to try to ensure that uncertainties and risks inherent in business situations are adequately considered' but does not include conservatism as a qualitative characteristic. The IASB's *Framework*, para. 37, describes prudence as 'the inclusion of a degree of caution in the exercise of the judgements needed in making the estimates required under conditions of uncertainty, such that assets or income are not overstated and liabilities and expenses are not understated' and includes prudence as a qualitative characteristic. The conceptual framework exposure draft states that 'describing *prudence* or *conservatism* as a qualitative characteristic or a desirable response to uncertainty would conflict with the quality of *neutrality* because ... an admonition to be prudent is likely to lead to a bias in the reported financial position and financial performance' (para. BC2.21, emphasis in original). To use the language of the conceptual framework, the question of the value of conservatism in financial reporting seems to turn on whether conservatism increases the decision-usefulness of reported information; some accounting researchers argue, and present evidence, that it would.

²⁹ The slope coefficient from a regression of returns on earnings is sometimes referred to as an earnings response coefficient (ERC), for example, see Kormendi and Lipe (1987) and Easton and Zmijewski (1989).

²⁷ This discussion follows from a portion of the discussion in Francis et al. (2004). I provide examples of accounting attributes that have been examined in accounting research; I do not attempt to identify and discuss all the attributes of accounting information that researchers have considered.

accounting numbers can be measured in terms of explanatory power (for example, of returns for earnings or vice versa) or in terms of estimated coefficients, over long returns windows or short, and for various configurations of accounting information (for example, net income versus net losses; line items on the income statement; earnings plus book value). In all cases, however, the reference construct is a market outcome measure – price or return. A standard whose application led to information with a stronger association between an accounting outcome and the market reference construct would constitute an improvement; the benefit of the standard is captured by the increase in the measure of association, which in turn is interpreted as capturing the increase in relevance and reliability combined.

Accounting-based attributes are grounded in the relation between earnings and cash (for example, accruals quality and smoothness) or in certain distributional properties of earnings for a large sample (for example, a high frequency of small positive income in a cross-sectional distribution of reported earnings and losses is sometimes identified as an indicator of managed earnings) or in the time-series properties of earnings (for example, persistence and predictability). In some cases, the attribute is inherently firm-specific (for example, earnings persistence) and in other cases the attribute appears only in a distribution of earnings outcomes (for example, a high frequency of small positive incomes). Accruals quality (for example, Dechow and Dichev, 2002) is the mapping of current accruals into lagged, contemporaneous and leading cash flows; smoothness (for example, Leuz et al., 2003) is the ratio of income variability to cash flow variability. Persistence is a measure of earnings sustainability (for example, the slope coefficient from a regression of current earnings on lagged earnings) and predictability is often measured as the ability of the current earnings number to predict the next period's earnings. These accounting-based attributes have been argued to be linked to the idea that earnings should assist in the assessment of either future earnings or future cash flows, or both, and that earnings management impairs that assessment. Accepting that argument as valid, the application of a standard which led to an improvement in one of these measures would improve financial reporting, with the amount of the benefit captured by the amount of the measure's improvement.

Analyst-forecast-based attributes are grounded in the presumption that analysts' earnings forecasts represent a key use of accounting information (by analysts, to form the forecasts) and a key source of

information to investors. These attributes include accuracy, bias and dispersion (sometimes interpreted as an indicator of uncertainty).³⁰ Application of a standard which led to an increase in accuracy, and/or a decrease in bias or dispersion would constitute an improvement and the amount of the benefit would be captured by the change in the measure.

In some cases, researchers have used combinations of several attributes to assess 'accounting quality', a term that is discussed but not included as a qualitative characteristic in the FASB's and IASB's conceptual frameworks. Standard-setter assessments of improvements in financial reporting use the qualitative characteristics – relevance, reliability, and comparability – as benchmarks of accounting quality in qualitative assessments.³¹ As previously noted, accounting researchers have linked these qualitative characteristics to empirical measures of certain attributes of accounting information. For example, Barth et al. (2008) capture accounting quality using indicators of earnings management (smoothing and managing toward positive income), timely loss recognition (frequency of large losses, perhaps interpretable as linked to conservatism) and value relevance (association between market values and both book value of equity and earnings, sometimes interpreted as capturing combined relevance and reliability, for example, Barth et al., 2001).

There are several open issues related to research that bases inferences about the effects of changes in accounting standards on an analysis of changes in the attributes of accounting information. First, to what extent are the attribute measures interrelated? For example, Barth et al. (2008) and others have noted that the accelerated loss recognition associated with requirements to recognise asset impairments before the losses are realised is likely to be associated with more volatile (less smooth) earnings and possibly lower earnings persistence. Second, to what extent are attributes of accounting information innate, in the sense of being manifestations of the neutral application of accounting standards to the reporting entity's operating environment and business model, as opposed to discre-

³⁰ Francis et al. (2004, particularly chapter 1) provide a detailed discussion of research on the properties of analyst earnings forecasts and analyst forecasting behaviour.

³¹ The joint IASB-FASB conceptual framework exposure draft states that 'quality is defined by the objective and qualitative characteristics of financial reporting information' and 'application of objectives and qualitative characteristics should lead to high-quality standards, which in turn should lead to high-quality financial reporting information that is useful for making decisions' (para. BC2.47, emphasis in original).

tionary, in the sense of arising from management's financial reporting decisions?³² Third, none of the commonly used attributes of accounting information captures comparability, the idea that similar arrangements and events are accounted for the same way. If comparability is a fundamental indicator of reporting quality then a standard that eliminates alternatives for the same arrangement or event (for example, eliminating the pooling-of-interests method for business combinations) would create a benefit and a standard that permits alternatives for the same arrangement or event (for example, a fair value option) would create a cost.³³

4.4. Market outcomes

Accounting and finance researchers, as well as some discussions by standard-setters, point to certain capital market outcomes as intrinsically desirable, including liquidity and a reduced cost of capital. Meeks and Meeks (2001: 41) list among the benefits of accounting regulation the following outcomes: (1) reduction of 'shareholder losses because of investment decisions which have been (legally) misinformed'; (2) 'reduction of misinformation attracting more funds into the capital market, resulting in ... a lower cost of capital and smaller bid-ask spreads'. There is not a general agreement among researchers about the most appropriate way to measure the constructs associated with market outcomes; as illustrated in the next subsection, researchers sometimes use multiple empirical measures for the same construct.

4.5. Examples of research into the effects of accounting standards

Accounting researchers can study the effects of one standard at a time or a wholesale change in standards, and can use accounting-based, market-based and analyst-based measures of effects. This subsection describes some of the research design decisions facing researchers and some of the inherent limitations of this research. I use three

papers to illustrate these design decisions.³⁴ Kohlbeck and Warfield (2008) examine the effects on several accounting quality measures of 19 general purpose (that is, not industry-specific) standards issued by the FASB between 1980 and 2005.³⁵ Barth et al. (2008) examine the effects on several accounting quality measures of the voluntary adoption of IAS/IFRS by 327 firms in 21 countries between 1990 and 2003. Daske et al. (2008) examine the effects of mandatory IFRS adoptions on several capital market outcomes for a sample of over 3,100 IFRS adopters between 2001 and 2005. In the context of this discussion, an improvement in an outcome indicator would be evidence of a benefit associated with a change in accounting standards.

The standard-setter's approach to thinking about the effects of a change in accounting standards proceeds one standard at a time, suggesting a research design that proceeds the same way. Kohlbeck and Warfield (2008) adopt this approach for 19 general purpose standards issued by the FASB during 1980–2005. A reading of their paper suggests the following design decisions and limitations, all of which are noted by the researchers and all of which could affect the degree to which the research design could, as a practical matter, be used by a standard-setter as part of a cost-benefit or effects analysis of a single standard.

First, to analyse the effect of a specific standard, the researcher must choose a pre-period (to benchmark the effects of the standard) and a post-period (to capture the effects of the standard); Kohlbeck and Warfield choose the four years ending two years before, and the four years beginning two years after, the implementation of each standard, and they group all standards that have a common effective year (for example, SFAS 142 and 144 were effective at the end of 2001 and SFAS 141 was effective for business combinations after 30 June 2001). In addition, standards are issued in adjacent years (for example, SFAS 143 was effective from 15 June

³² Results in Dechow and Dichev (2002) and Francis et al. (2004, 2005) suggest that the innate portion of at least some earnings attributes is larger than the discretionary or financial reporting portion.

³³ My emphasis on comparability in this discussion is in contrast to the conceptual framework exposure draft, which has demoted comparability to a supporting role (an enhancing qualitative characteristic, not a fundamental qualitative characteristic; para. QC15–QC19). The exposure draft contains the following qualified statement (para. QC19) that, 'Although a single economic phenomenon can be faithfully represented in multiple ways, permitting alternative accounting methods for the same economic phenomenon diminishes comparability and, therefore, may be undesirable.' (emphasis added)

³⁴ I refer to these papers only to illustrate certain research design decisions. This section is not intended to provide a survey of research on the effects of accounting standards. Each of the three example papers contains its own literature review that provides information on other related papers.

³⁵ There is variation in the applicability of even these general purpose standards. While most or all entities would have deferred tax assets and deferred tax liabilities (SFAS 109, *Accounting for Income Taxes*, 1992, now part of Accounting Standards Codification (ASC) Topic 740), not all firms would have defined benefit pensions and post-retirement benefits (SFAS 87, *Employers' Accounting for Pensions*, 1985, and SFAS 106, *Employers' Accounting for Postretirement Benefits Other than Pensions*, 1990, both now part of ASC Topic 712) or asset retirement obligations (SFAS 143, *Accounting for Asset Retirement Obligations*, 2001, now part of ASC Topic 410).

2002, just six months after the SFAS 142/144 effective dates). As a result, there is not a precisely demarcated pre-period for a standard, since the pre-period for one standard could well overlap with the post-period of another.

Second, *all* sample firms must apply these general purpose standards, so there is no comparison (or control) group to use as a benchmark for reporting in the absence of the change in guidance.³⁶ Furthermore, most of the time all (or nearly all) firms must apply the standards starting at the same time, so effects are clustered in calendar time and potentially confounded with macroeconomic or industry factors that affect financial reporting³⁷. Kohlbeck and Warfield use a trend variable to capture factors unrelated to accounting standards that are changing over time, and control variables suggested by previous research for other known effects.

Third, results may seem hard to interpret, in the sense that the effect of a given standard may be too small to detect in the data (a question of power) or a given standard may have differing effects on different accounting attributes. To increase power, Kohlbeck and Warfield average their measures of financial reporting effects across 11 standards events (that is, 11 years in which 19 standards became effective; some years have multiple standards). They note that their detailed results are mixed, both across standards events and across the attributes they consider. For example, averaged across 11 standards events, they study two analyst-based attributes, forecast accuracy (which increases) and forecast dispersion (which does not change significantly) and three accounting-based attributes, persistence (no significant change), earnings response coefficients and accruals quality (both of which decrease).

Fourth, Kohlbeck and Warfield's decision to focus on standards issued by the FASB implies that

their sample firms face a common regulatory environment, thereby eliminating one potential confounding variable. However, managers of the sample firms may or may not face common (across managers) and constant (time-invariant) incentives to make high quality reporting decisions, particularly over such a long sample period. Reporting entities may vary both in cross-section and over time in the quality of either or both information/internal control systems to support financial reporting and professional accounting expertise. Furthermore, the demands placed by specific standards on information systems and expertise are likely to vary, with unknown effects on attributes of accounting information.

One substantial change in research designs, which at least in principle addresses the question of overlapping and confounding effects of individual standards as they are issued and adopted over time and the question of effects that exist but are too small to be detected in the data, is to study a wholesale change in accounting standards such as the voluntary or mandatory adoption of IAS/IFRS. The design can focus on a single country or several, as in Barth et al. (2008; 327 firms voluntarily adopting IAS/IFRS in 21 countries) and Daske et al. (2008; mandatory adoption of IFRS in 26 countries). A reading of these papers suggests the following design decisions and limitations, all of which are noted by the researchers and all of which could affect the degree to which the research designs could, as a practical matter, be used by a standard-setter.

First, cross-country studies typically do not contain even roughly equal numbers of firms per country. For example, of the 21 countries studied by Barth et al., six have one voluntary IAS/IFRS adopter, three have two adopters, and over 70% of the sample is from China, Germany and Switzerland. Of the 26 countries and 8,726 firms studied by Daske et al., four countries have 40 or fewer firms and about 33% (60%) of the sample observations are associated with two (five) countries. This concentration of observations in some countries, with a relative dearth in other countries, is a feature of the data that cannot be altered by the researcher. Results obtained for the sample as a whole, in terms of effects, may vary in their applicability to a given jurisdiction.

Second, accounting researchers emphasise the importance, in cross-country studies, of controlling for differences in economic environments and regulation, particularly enforcement. The outcome indicators examined are affected by the standards themselves *and* the way the standards are imple-

³⁶ An alternative cross-sectional research design would focus on industry standards that would be applied only by certain firms, for example, SFAS 66, *Accounting for Sales of Real Estate*, 1982, now part of Accounting Standards Codification (ASC) Topic 976. However, research (e.g. Francis et al., 2004) suggests that a substantial portion of several accounting-based attributes appears to be determined by the firm's business model, which would be a function of, among other things, industry membership.

³⁷ For example, US GAAP (specifically SFAS 115, *Accounting for Certain Investments in Debt and Equity Securities*, 1993, now part of ASC Topic 320) requires an 'other than temporary impairment' (OTTI) analysis for fair value declines of available-for-sale and held-to-maturity securities. This requirement would not be expected to affect financial reporting during times of rising or stable financial asset prices, but would be expected to affect financial reporting during market downturns.

mented and enforced. Researchers can include control variables or shift the research design to accommodate these latter effects. With regard to a research design decision, for example, Barth et al. (2008) compare IAS/IFRS adopters before and after adoption (the firm is its own control) and use matched samples of adopters and non-adopters (to control for inherent differences that are associated, perhaps causally, with the adoption decision). If both adopters and non-adopters in the same jurisdiction exhibit changes in attributes of accounting information after the time period of IAS/IFRS adoption *and* the adopter changes were more positive, then that incremental difference could be interpreted as a measure of the benefits of voluntary IAS/IFRS adoption. Taking a related but distinct approach, Daske et al. (2008) use three types of controls in their examination of mandatory IFRS adoptions: firms in jurisdictions that do not require or permit IFRS reporting; firms in mandatory IFRS adoption countries whose adoption dates are after December 2005 because of their fiscal year-ends; firm-fixed effects.³⁸

Third, cross-country studies are not immune from results that vary depending on which outcome indicator is considered and depending on the specifics of the research design. For example, Barth et al. (2008) report that some results have predicted signs but are not significant at conventional levels and some results are contrary to predictions. As a result, researchers tend to rely on the weight of the evidence to support broad conclusions about effects, with the understanding that differences in research design decisions and differences in choices of outcome indicators could affect the results and conclusions.

It is possible, at least in principle, to apply the standard-by-standard research design in Kohlbeck and Warfield (2008) with a cross-country sample to examine the effects of a change in IFRS for IFRS users. An example would be revised IFRS 3, effective July 2009. If practicable, this extension would support an examination of the effects of revisions in IFRS, as opposed to the wholesale voluntary or mandatory adoptions that have been more commonly studied. Such an extension would require combining the research design decisions of Kohlbeck and Warfield with those of Barth et al. (2008) and Daske et al. (2008). In all cases, however, empirical researchers using these designs provide *ex post* analyses, based on outcomes

realised after a standard is issued, and cannot provide an *ex ante* assessment of costs and benefits.

Although standard-setters refer to qualitative characteristics of financial reporting information (relevance, reliability and comparability) and accounting researchers link these to empirical attributes of accounting information, the most direct measure of benefit to the owners of a firm that is subject to authoritative guidance and changes in that guidance is capital market outcomes such as liquidity and the cost of capital. Under this view, accounting quality as captured by accounting-based, market-based and analyst-based attributes is an intermediary outcome indicator between financial reporting and market outcomes.³⁹

Daske et al. (2008) analyse capital market effects – liquidity, cost of equity and the book-to-market ratio – in a cross-country study of mandatory IFRS adoptions. Recognising that researchers do not agree on how to measure certain capital market effects, they use four proxies for liquidity and four proxies for cost of equity (their measure is the average of the four); they interpret the book-to-market ratio as an indicator of equity valuation. Recognising that the capital market effects they study are not independent, they note that improvements in liquidity could decrease the cost of capital which would in turn increase equity values (other things constant). Their results suggest that mandatory IFRS adoptions are associated with liquidity benefits and, perhaps, cost of capital and valuation benefits, subject to the interpretation that market agents impound the effects of IFRS adoptions into costs of capital and valuations *before* IFRS are implemented – that is, the effects are anticipatory. The authors also note that magnitudes of estimated effects vary with the details of research design choices.

Accounting research on the effects, particularly the benefits, of accounting standards focuses on outcome indicators, for example, accounting-based measures of earnings quality or costs of equity. With regard to these outcomes, accounting researchers have not resolved the question of what are the relative contributions of standards, implementation decisions,⁴⁰ assurance and enforcement, including actions by securities regulators and, if

³⁸ Fixed-effects models control for unobserved characteristics that do not vary over time, but do vary across firms.

³⁹ Francis et al. (2004) investigate the association between several market-based and accounting-based earnings attributes and several measures of the cost of equity capital.

⁴⁰ I have suggested, in this discussion paper and elsewhere, that whereas accounting researchers often focus on the role of incentives in implementation decisions, it seems reasonable to consider the possibility that management's expertise and the availability, or not, of high quality data are at least equally important factors in implementations.

applicable, private actions. Accounting researchers often focus on some combination of incentives facing managers and strictness of enforcement as particularly important, and qualify their results as dependent on the ability to control for these effects. For example, Barth et al. (2008: 496–497) conclude that ‘Although we include research design features to mitigate the effects of incentives and the economic environment, we cannot be sure that our findings are attributable to the change in the financial reporting system [to IAS/IFRS] rather than to changes in firms’ incentives and the economic environment.’

This difficulty is an example of an identification problem, which arises when more than one set of factors (model parameters) can generate the outcomes that are actually observed. In the specific case of financial reporting standards and earnings attributes that are commonly studied by accounting researchers, the factors include the standards (our object of interest), the objectivity and expertise of those who implement the standards; the measurement complexity that is inherent in the arrangement being accounted for; the quality of the underlying information systems and the data they collect; the strength of assurance/attestation/governance functions; the strength of enforcement. Research that focuses on the effects of standards must of necessity control for these factors or assume they are second order effects or assume that they do not vary in ways that would affect the outcomes. Any one of these approaches is of course subject to its own difficulties.

To summarise, academic accounting research that considers the effects of accounting standards has tended to focus on benefits or at least on reporting outcomes and capital market effects. Academic accounting researchers have not focused much on survey-based methods to develop cost data. Research that considers reporting outcomes, for example, attributes of accounting information, sometimes reports mixed results depending on which outcome indicator is considered. Research that considers capital market outcomes similarly finds mixed results, depending on the specific capital market outcome considered and research design used. Researchers who examine accounting outcomes and capital market outcomes are analysing summary indicators that reflect the culmination of a multi-step reporting process (for accounting outcomes) or a multi-step reporting process plus a market-use process (for capital market outcomes); research has provided few definitive results as to what are the most important effects in these processes.

5. Concluding comments

Discussions of costs and benefits (or effects) of individual financial accounting standards are a pervasive feature of standard-setting; more generally, accounting researchers and others debate the costs and benefits of regulating accounting disclosures. The FASB laid out many of the issues – without resolution – in a 1991 Special Report on *Benefits, Costs and Consequences of Financial Accounting Standards*. Accounting researchers have focused on these issues from a variety of perspectives but have not provided definitive results or a generally agreed-upon approach to assessing costs, or benefits, or consequences. In fact, if allowances are made for the development of research designs, empirical techniques and measurement methods, many of the points made in the 1991 FASB Special Report remain valid today.

This discussion paper begins with a description of conventional cost-benefit analysis and analyses whether these techniques are, as a practical matter, applicable to the evaluation of individual accounting standards. I separate the collection of information about the cost to apply a standard from the development of benefits measures, and consider the distinction between a cost of applying an accounting standard and the consequences of the standard. Cost information is perhaps most readily collectible from survey data, although issues of non-response and unreliable estimates surely arise. Accounting researchers have studied the benefits of accounting standards, or at least their effects, using archival-empirical techniques and measures of financial reporting outcomes and capital market outcomes. Results of these investigations sometimes produce mixed and even conflicting results, perhaps because of inherent research design and measurement difficulties. In particular, accounting researchers focus on outcome indicators of the entire financial reporting process, of which standards are but one component (and researchers dispute the overall importance of that component).

I believe that the discussion in this paper supports the following conclusions. First, the way that accounting standard-setters approach cost-benefit (or effects) analysis does not align well with conventional cost-benefit techniques applied to public sector decision making, so it may make sense to abandon terminology that has perhaps been misleading, in the sense of non-descriptive of the cognitive processes standard-setters actually follow. Second, the techniques and methods of survey research to elicit revealed preferences and stated preferences might be used to gather data on the costs of accounting standards; however, it is an

empirical question as to whether the results would be worth the out-of-pocket costs, time delays and cognitive effort involved. Third, accounting researchers have devoted significant effort to estimating effects, including benefits, of changes in accounting standards, including estimates based on changes in the attributes of accounting information and changes in capital market outcomes such as liquidity and the cost of capital. Results of this research, however, may not be entirely satisfactory in terms of an effects analysis of a given financial reporting standard, in the context of financial reporting standard-setting, because of the limitations of research designs and techniques.

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- [Editor's note: Technical references to standards are not repeated here as they are clearly documented within the text.]
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